

GUIDANCE FOR BIKEWAY/MULTIUSE TRAIL PAVEMENTS

Introduction

This document is intended to provide guidance on pavement structures to be used for bikeways and multiuse trails. It may be used by State and/or consultant personnel that are responsible for designing these transportation facilities.

Roads that are expected to experience heavier traffic will likely require a thicker pavement structure and should be constructed as service roads designed for multi-vehicle traffic. These roads are outside the scope of this document. Bikeway pavements built on railroad ballast are also outside the scope of this document and should be addressed separately.

Recommendations

Two categories of pavement structures are listed below, with additional alternatives for each category. These alternatives are based on the intended roadway use. In addition to these alternatives, designers should also consider calling for the installation of root barriers to a depth of 18"-24" to assist in prevention of overgrowth of roots underneath or through the pavement structure.

Category A: For facilities where pedestrians or bicycles represent the majority of traffic loads (save the periodic mowing tractor or emergency vehicle).

Pavement structure A1 is the preferred pavement structure. Pavement structure A2 can be selected when the facility is being constructed as part of a larger project where a variety of other Superpave mixes are already being used. However, HMA S0.25 is the available mix best suited as the surfacing material for interaction with bikes, rollerblades, and shoes.

A1: (preferred)

- 1.25" HMA S0.25 (Traffic Level 1), on
- 1.5" HMA S0.375 (Traffic Level 1), on
- 6" Processed Aggregate Base¹

A2:

- 1.25" HMA S0.375 (Traffic Level 1), on
- 1.5" HMA S0.375 (Traffic Level 1), on
- 6" Processed Aggregate Base¹

Category B: For facilities that will service maintenance vehicles (light trucks, mowing equipment, public safety vehicles) on a daily basis.

Pavement structure B1 is the preferred pavement structure. Pavement structure B2 can be selected when the facility is being constructed as part of a larger project where a variety of other Superpave mixes are already being used. However, HMA S0.25 is the available mix best suited as the surfacing material for interaction with bikes, rollerblades, and shoes.

B1: (preferred)

- 1.25" HMA S0.25 (Traffic Level 1), on
- 2" HMA S0.5 (Traffic Level 1), on
- 10" Processed Aggregate Base²

B2:

- 1.5" HMA S0.375 (Traffic Level 1), on
- 2" HMA S0.5 (Traffic Level 1), on
- 10" Processed Aggregate Base²

Notes – to be included in the plans by the project designer (use Note 1 when a Category “A” structure is selected and Note 2 when a Category “B” structure is selected; Note 3 should be included regardless of which category is selected):

1. Processed Aggregate Base thickness to be increased to 12" in areas of poor drainage (visible standing water/high water table) or soils conditions, where the stability of the subgrade for placement of hot mix asphalt (HMA) after placement of a single 6" lift of Processed Aggregate Base is suspect. This determination is to be made by the Engineer in the field as needed at the time of construction. In extreme cases (where the subgrade cannot support construction equipment), increase the Processed Aggregate Base thickness to 24", to be placed over a suitable geotextile material, as determined and directed by the Engineer.
2. Processed Aggregate Base thickness to be increased to 16" in areas of poor drainage (visible standing water/high water table) or soils conditions, where the stability of the subgrade for placement of hot mix asphalt (HMA) after placement of the 10" of Processed Aggregate Base is suspect. This determination is to be made by the Engineer in the field as needed at the time of construction. In extreme cases (where the subgrade cannot support construction equipment), increase the Processed Aggregate Base thickness to 24", to be placed over a suitable geotextile material, as determined and directed by the Engineer.
3. To prevent pavement heaves, prune roots along outside limits of grading prior to clearing and grubbing.

Please contact the Pavement Management Unit at 860-594-3280 if you have any questions.